

Steve Olson

Certified Crop Advisor (CCA)

ST. CROIX COUNTY - COMMUNITY DEVELOPMENT DEPARTMENT
RESOURCE MANAGEMENT DIVISION
CONSERVATION AND LAND USE SPECIALIST

Topics

St. Croix County General Zoning Ordinance Chapter 17

St. Croix County Animal Waste Storage Facilities Ordinance
Chapter 11

Nutrient Management Plans (Snap-Plus)

590 Nutrient Management Standard

- Administration & Enforcement by St. Croix County Community Development Department (SCC-CDD)

St. Croix County Code of Ordinances Chapter 17 Zoning AG-1 and AG-2 AGRICULTURAL DISTRICT

Livestock facilities that exceed one animal unit per acre of land suitable for animal waste utilization or livestock facilities of 500 animal units or more are allowed with a land use permit if all of the following minimum required standards are met:

- Wis. Adm. Code Ch. ATCP 151 Livestock Facility Siting (DATCP)
- Wis. Adm. Code Ch. NR 243 Animal Feeding Operations (DNR)
- Wis. Adm. Code Ch. NR 151 Runoff Management
- Ch. 11, St. Croix County Code of Ordinances, Animal Waste Storage
- Wis. Adm. Code Ch. ATCP 50 Soil and Water Resource Management Program
- NRCS Conservation Practice Code 590 Nutrient Management
- St. Croix County Floodplain Overlay District and Shoreland Overlay Districts Standards Apply (various structure setbacks apply)

St. Croix County Code of Ordinances Chapter 17 Zoning

RURAL RESIDENTIAL DISTRICT

Livestock facilities that exceed one animal unit per acre of land suitable for animal waste utilization or livestock facilities of 500 animal units or more may be allowed with a conditional use permit if all of the following minimum required standards are met:

- Wis. Adm. Code Ch. ATCP 151 Livestock Facility Siting (DATCP)
- Wis. Adm. Code Ch. NR 243 Animal Feeding Operations (DNR)
- Wis. Adm. Code Ch. NR 151 Runoff Management
- Ch. 11, St. Croix County Code of Ordinances, Animal Waste Storage
- Wis. Adm. Code Ch. ATCP 50 Soil and Water Resource Management Program
- NRCS Conservation Practice Code 590 Nutrient Management (SNAPPLUS)
- St. Croix County Floodplain Overlay District and Shoreland Overlay Districts Standards Apply (various structure setbacks apply)

St. Croix County Code of Ordinances

Ch. 11 Animal Waste Storage

Adopted in 1985, Current Form August 14, 2012

Purpose is to regulate the location, construction, and application of waste from livestock waste storage facilities in order to prevent the pollution of the county's surface and groundwater and thereby protect the public health, environment, safety and general welfare of county residents, animals and plants, and the economy.

St. Croix County Code of Ordinances

Ch. 11 Animal Waste Storage Facilities

Requires Two Permits

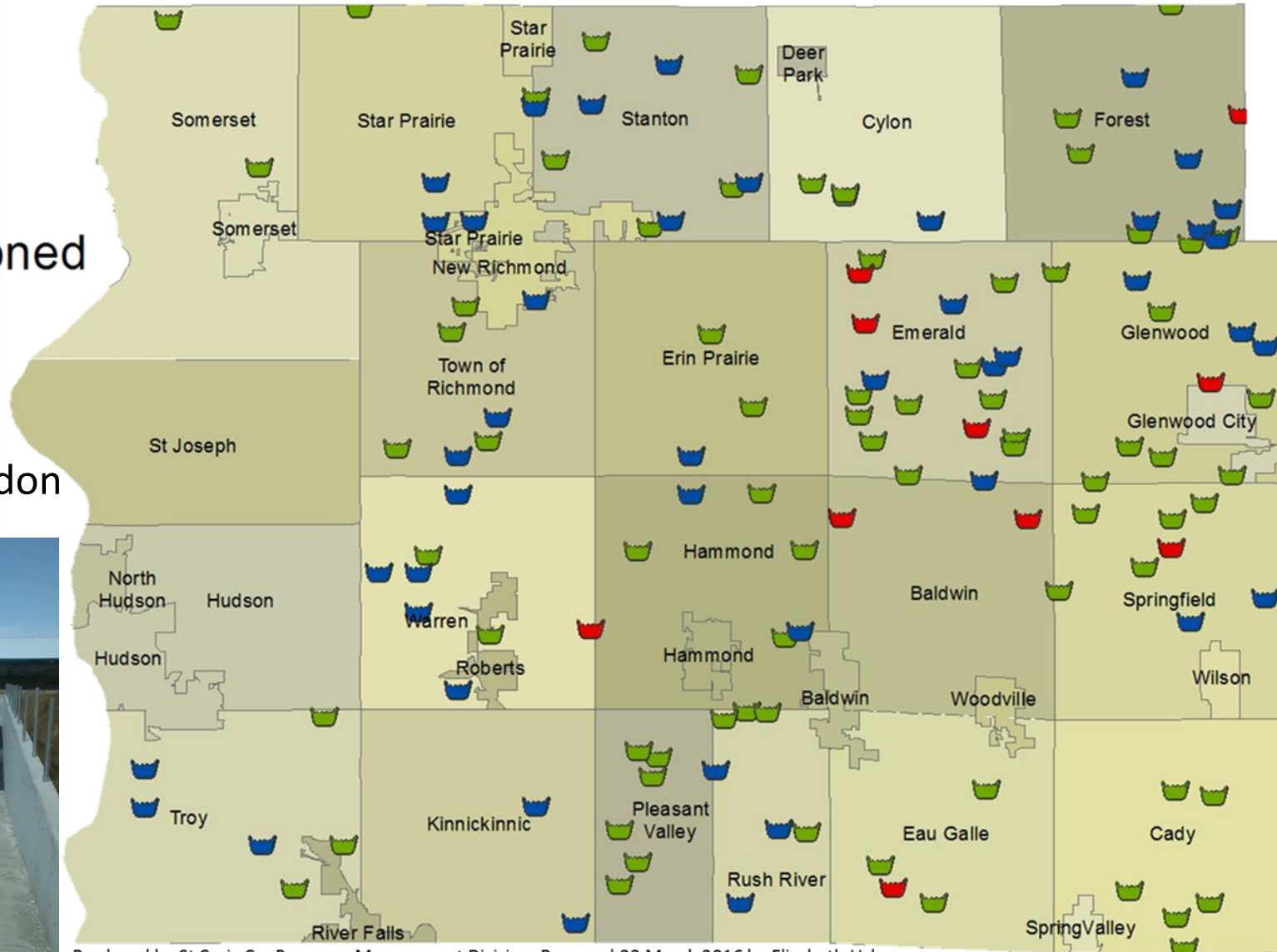
Construction Permit reviewed & issued by SCC- CDD and DATCP.

- As-built Drawings signed by a professional engineer licensed in the State of Wisconsin certifying that the facility was installed according to standards and specifications.
- (DNR issues separate WPDES permit for construction)

Operation Permit reviewed & Issued by SCC - CDD

- The operator annually submits a certified 590 Nutrient Management Plan to the Community Development Department.
- The operator annually certifies compliance with Wisconsin Administrative Code ATP 50 and NR 151 to the St. Croix County Community Development Department

St. Croix County Animal Waste Storage Structures



Produced by St Croix Co. Resource Management Division, Prepared 23 March 2016 by Elizabeth Usborne

Waste storage abandonment process (NRCS 360)



1. Pump liquid and remove solids (apply to cropland at agronomic rates)
2. Remove any contaminated soil minimum 6 inches
3. Backfill with native soils
4. Place top soil, seed and mulch
5. Finished grades shall have 2% positive drainage

NR 151 RUNOFF MANAGEMENT

NR 151.08 Manure Management Prohibitions

A livestock operation shall have no overflow of manure storage facilities.

A livestock operation shall have no unconfined manure piles in a water quality management area.

A livestock operation shall have no direct runoff from a feedlot or stored manure into the waters of the state.

A livestock operation may not allow unlimited access by livestock to waters of the state in a location where high concentrations of animals prevent the maintenance of adequate sod or self-sustaining vegetative cover. This prohibition does not apply to properly designed, installed and maintained livestock or farm equipment crossings.

SnapPlus

Wisconsin's Nutrient Management Planning Software

This DATCP program helps farmers make the best use of their on-farm nutrients, as well as make informed and justified commercial fertilizer purchases.

By calculating potential soil and phosphorus runoff losses on a field-by-field basis while assisting in the economic planning of manure and fertilizer applications, SnapPlus provides Wisconsin farmers with a tool for protecting soil and water quality.

SnapPlus is provided free to any producers to utilize.

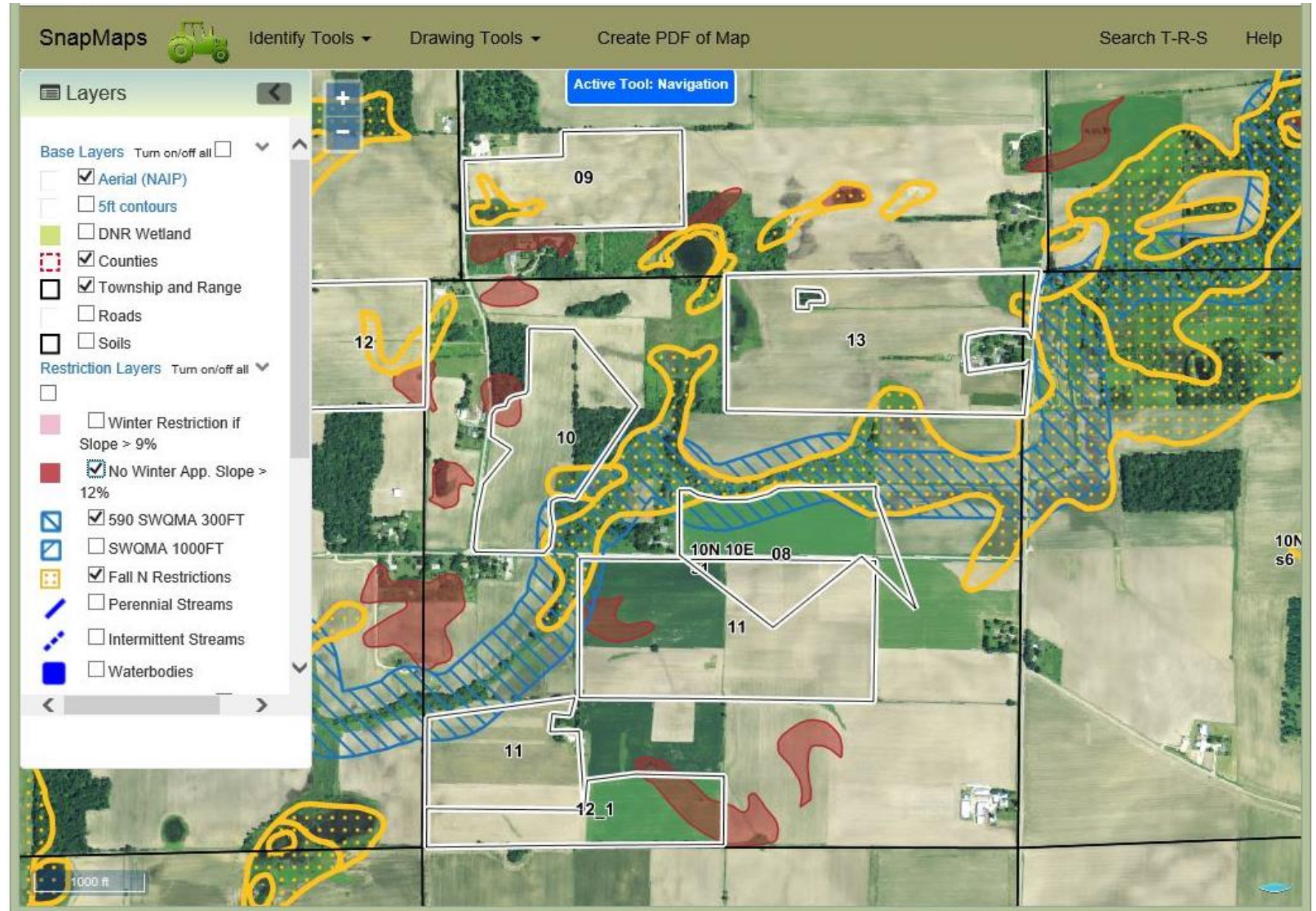
Dunn
St. Croix

Soil test history for field: 5								
County	Acres	Slope	Field Soils:	Soil Name	Soil Symbol	Subsoil Fertility	Soil Texture	
Dunn	3.5	9.0 %	Critical:	Dobie	273C2	L	Silt Loam	
			Predominant:	Dobie	273C2	L	Silt Loam	

	Test Date	Soil Test Lab	Lab Number	Plow Depth (inches)	Avg pH	Avg OM (%)	Avg P (ppm)	Avg K (ppm)	Avg Ca (ppm)	Avg Mg (ppm)	Avg B (ppm)	Avg Mn (ppm)	Avg Zn (ppm)	Avg S (ppm)	Avg CEC
	2007-04-19	Dairyland Labs	8S1578	6.5	6.6	1.6	45	202	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2011-11-17	Soil & Forage Analysis Lab	4977	7	6.6	2.0	48	168	0.0	0.0	0.0	0.0	0.0	0.0	0.0
▶	2015-11-18	Soil & Forage Analysis Lab	6577	6	7.1	1.7	42	91	0.0	0.0	0.0	0.0	0.0	0.0	0.0

 [illegible]

SnapMaps
showing field
boundaries, waste
spreading
restrictions, soils,
water quality
management areas,
well locations and
setbacks, etc. Is
utilized by producers
to guide field
application rates



File Import/Export Tools View Help Save snapshot

Subfarm: Show all fields. * Field: 7 Farm name: farmTables.2017MapleHillsDairy.snapDb
 Group: Show all fields. Location: M:\wp\Stuff\farm2017nmp

Farm Soil Tests SnapMaps Fields Nutrients Cropping Daily Log Reports

Fields Subfarms Groups

[Right-click on column headers for single or multi-cell editing of selected cells.](#)

Total Acres: 366.7 Field Count: 37 [What is Tiled?](#)

ALL	Field Name	A c t i v e	Sub Farm	Fsa Tract #	Fsa Field #	Size (acres)	County	Soil Map Symbol (critical)	Soil Series Name (critical)	Soil Map Symbol (pre- dominant)	Soil Series Name (pre- dominant)	Field Slope (%)	Field Slope Length (ft)	Below Field Slope to Water (%)	Distance to Perennial Water (ft)	Re striction Features	T i l e d ?	Field notes
	1	<input checked="" type="checkbox"/>		16178		14.50	Dunn	438A	HOOPESTON	438A	HOOPESTON	1	250	0 - 2	0 - 300	yes	<input type="checkbox"/>	
	2	<input checked="" type="checkbox"/>		16178		34.00	Dunn	273D2	DOBIE	273D2	DOBIE	16	100	2.1 - 6	301 - 1000	yes	<input type="checkbox"/>	
	3	<input checked="" type="checkbox"/>		16178		4.50	Dunn	273C2	DOBIE	273C2	DOBIE	9	150	2.1 - 6	1001 - 5000		<input type="checkbox"/>	
	4	<input checked="" type="checkbox"/>				8.50	Dunn	273C2	DOBIE	273C2	DOBIE	9	150	2.1 - 6	1001 - 5000		<input type="checkbox"/>	
	5	<input checked="" type="checkbox"/>		16178		3.50	Dunn	273C2	DOBIE	273C2	DOBIE	9	150	2.1 - 6	301 - 1000		<input type="checkbox"/>	
	6	<input checked="" type="checkbox"/>				7.00	Dunn	273D2	DOBIE	273B2	DOBIE	4	200	2.1 - 6	0 - 300	yes	<input type="checkbox"/>	
	7	<input checked="" type="checkbox"/>		16178		15.50	Dunn	273C2	DOBIE	273C2	DOBIE	9	150	2.1 - 6	0 - 300	yes	<input checked="" type="checkbox"/>	
	8	<input checked="" type="checkbox"/>		16178		11.40	Dunn	273B2	DOBIE	273B2	DOBIE	4	200	2.1 - 6	301 - 1000		<input type="checkbox"/>	
	9	<input checked="" type="checkbox"/>		13113		9.40	Dunn	275D2	ELEVASIL	275D2	ELEVASIL	12	100	2.1 - 6	0 - 300	yes	<input type="checkbox"/>	
	10	<input checked="" type="checkbox"/>		13113					ELEVASIL		ELEVASIL	12	100	2.1 - 6	0 - 300	yes	<input type="checkbox"/>	
	11	<input checked="" type="checkbox"/>		13113					DOBIE		DOBIE	9	150	2.1 - 6	0 - 300	yes	<input type="checkbox"/>	
	12	<input checked="" type="checkbox"/>		10922					ELEVASIL		ELEVASIL	12	100	2.1 - 6	301 - 1000	yes	<input type="checkbox"/>	
	13	<input checked="" type="checkbox"/>		1536					ELEVASIL		ELEVASIL	12	100	2.1 - 6	301 - 1000	yes	<input type="checkbox"/>	
	14	<input checked="" type="checkbox"/>		1536					KEVILAR		KEVILAR	4	200	0 - 2	301 - 1000	yes	<input type="checkbox"/>	
	15	<input checked="" type="checkbox"/>															<input type="checkbox"/>	
	16	<input checked="" type="checkbox"/>		1536													<input type="checkbox"/>	
	17	<input checked="" type="checkbox"/>															<input type="checkbox"/>	
	18	<input checked="" type="checkbox"/>		1536													<input type="checkbox"/>	
	19	<input checked="" type="checkbox"/>		1536													<input type="checkbox"/>	
	B-1	<input checked="" type="checkbox"/>		1536													<input type="checkbox"/>	
	B-2	<input checked="" type="checkbox"/>		1536													<input type="checkbox"/>	
	B-3	<input checked="" type="checkbox"/>		1536													<input type="checkbox"/>	
	B-4	<input checked="" type="checkbox"/>		1536													<input type="checkbox"/>	
	F-1	<input checked="" type="checkbox"/>															<input type="checkbox"/>	
	F-2	<input checked="" type="checkbox"/>															<input type="checkbox"/>	
	F-3	<input checked="" type="checkbox"/>															<input type="checkbox"/>	
	F-4	<input checked="" type="checkbox"/>															<input type="checkbox"/>	
	F-5	<input checked="" type="checkbox"/>															<input type="checkbox"/>	
	F-6	<input checked="" type="checkbox"/>															<input type="checkbox"/>	
	F-7	<input checked="" type="checkbox"/>															<input type="checkbox"/>	
	F-8	<input checked="" type="checkbox"/>															<input type="checkbox"/>	

Setup Field Restriction Features

Spreading Restriction Features
for Field 7

Note: If any part of the field has an N restricted soil or is in a SWQMA, then it should be marked as such below.

Field soils Dominant critical: 273C2 Predominant: 273C2

Fall N Restrictions

N restricted soil other than selected soils: 269A Code: W [N Restriction definitions](#)

Field Restrictions

☒ Field in 590 SWQMA

☐ Drinking water well within 50ft of field edge

☐ Local prohibitions for winter applications

☐ Slope restriction for winter applications

☐ Concentrated flow channel

Conduits to groundwater within 200ft downslope of field

☐ Sinkholes

☐ Well

☐ Fractured bedrock at surface

☐ Non-metallic mine (a gravel or sand mine for example)

☐ Other direct conduit to groundwater

Notes

SnapPlus - 590 soil data information

Soil Map units with 590 Restrictions due to potential for nitrate leaching due to ground water 2007-04-20

Definition of symbols:

P - High permeability N restricted soils

R - N restricted soils with less than 20 inches to bedrock

W - N restricted soils with less than 12 inches to apparent water table

+ - This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

Close

SnapPlus 16.3 built on 2016-11-01 - Maple Hills Dairy

FileImport/ExportToolsViewHelp

Save snapshot

?

Farm name: farmTables.2017MapleHillsDairy.snapDb

Location: M:\wp\Stuff\farm\2017nmp

Farm

Soil Tests

SnapMaps

Fields

Nutrients

Cropping

Daily Log

Reports

Crop Year: 2017

Copy Sources/Fertilizers/Herds

Edit Shared Fertilizers

Nutrient sources

Manure production estimator

Animal units calculator

Grazing herd setup

Manure Analysis

Manure/Bio Source Data

N, P2O5, K2O & S values are for first year available nutrients in
lbs/unit solid or lbs/1000 gallons

Value of nutrients in: 2017
based on commercial fertilizer costs.

N

0.4

\$/lb

P2O5

0.5

\$/lb

K2O

0.4

\$/lb

Sulfur

0.25

\$/lb

	Source Name	Nutrient Type	N surface	N incorp	N inject	P2O5	K2O	S	Dry matter %	Analysis Date	Known Annual Volume	Volume Units	Unit Value (Incorp)	Total Value (incorp)
▶	Dairy Solid	Dairy, solid	2.0	3.0	3.0	3.0	6.0	0.7	33		448	Tons	\$5.28	\$2,363
	Liquid	Dairy, liquid	4.0	6.0	7.0	3.0	11.0	0.6	2		934,000	Gallons	\$8.45	\$7,892

The unit value is \$/ton or \$/1000 gals

Total: \$10,256

Dry fertilizer sources

\$

	Fertilizer name	% N	% P2O5	% K2O	% S	% Mg	% Ca	Cost \$ per ton
▶	Ammonium sulfate (AMS)	21	0	0	24.0	0.0	0.0	\$300
	Diammonium Phosphate (DAP)	18	46	0	0.0	0.0	0.0	\$450
	Potassium Chloride	0	0	61	0.0	0.0	0.0	\$350
	Urea	46	0	0	0.0	0.0	0.0	\$350

Liquid fertilizer sources

\$

	Fertilizer name	% N	% P2O5	% K2O	% S	% Mg	% Ca	Density lbs/gal	Cost \$ per ton
▶	Liquid 10-34-0	10	34	0	0.0	0.0	0.0	11.6	\$500

ST. CROIX COUNTY

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Subfarm: Show all fields. * Field: 1 Farm name: farmTables.2017MapleHillsDairy.snapDb

Group: Show all fields.

Location: M:\wp\Stuff\farm\2017nmp

Farm

Soil Tests

SnapMaps

Fields

Nutrients

Cropping

Daily Log

Reports

Year	Soil Test	pH	OM	P	K	County	Acres	Pred. Soil	Symbol	Group	Texture	Field Rest.
2017	2015-11-18	6.9	2.2	43	66	Dunn	14.5	Hoopeston	438A	L	Sandy Loam	yes

Explain

[<]

1

Rotation Wizard

Calculate all years

Add/Delete Years

[>]

Crop Year (Fall to Fall):	2011	2012	2013	2014	2015	2016	2017		
Crop:	Corn grain	Soybeans 30-36 inch ro	Corn grain	Oatlage w/ Alfalfa/Brome	Alfalfa/Brome	Alfalfa/Brome	Corn silage		
Yield Goal:	131-150	46-55	171-190	2.0-3.5	4.6-5.5	4.6-5.5	20.1-25		
Tillage:	Spring Chisel, disked	Spring Cultivation	Spring vertical tillage	Fall Chisel, disked	None	None	No Till		
Soil Test Date:	2011-04-21	2011-11-17	2011-11-17	2011-11-17	2011-11-17	2015-11-18	2015-11-18		
Lime Rec:	NA	NOT MET	NOT MET	NOT MET	NOT MET	0	0		
Irrigation / MRTN info:	<input type="checkbox"/> Irrigated 0.05/MRTN	<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated 0.05/High	<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated 0.05/High	<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated
Season notes:									
(lbs/acre)	N P2O5 K2O	N P2O5 K2O	N P2O5 K2O	N P2O5 K2O	N P2O5 K2O	N P2O5 K2O	N P2O5 K2O	N P2O5 K2O	N P2O5 K2O
UW Recommendation:	125 80 70	0 0 130	160 0 95	20 0 165	0 0 355	0 0 355	210 0 240		
Prior years' extra:	- 0 0	- 0 0	- 0 0	- 100 165	- 154 153	- 0 0	- 0 0		
Adjusted UW recommendation:	125 80 70	0 0 130	160 0 95	20 0 0	0 0 202	0 0 355	210 0 240		
1st & 2nd year legume credit:	0 - -	0 - -	0 - -	0 - -	0 - -	0 - -	90 - -		
2nd & 3rd year manure credit:	0 0 0	0 0 0	0 - -	38 - -	42 - -	11 - -	0 - -		
This year's manure:	0 0 0	0 0 0	150 90 255	90 54 153	0 0 0	0 0 0	36 27 99		
This year's fertilizer:	0 0 0	0 0 122	5 10 5	0 0 0	0 0 0	0 0 0	46 0 0		
Total credits & applications:	0 0 0	0 0 122	155 100 260	128 54 153	42 0 0	11 0 0	172 27 99		
Over(+)/Under(-) adj UW rec:	-125 -80 -70	0 0 -8	-5 100 165	108 54 153	42 0 -202	11 0 -355	-38 27 -141		
Annual Total PI:	0	1	2	1	1	0	1		
Particulate PI:	0.3	0.2	0.4	0.1	0.1	0.0	0.1		
Soluble PI:	0.1	0.5	1.3	0.5	0.5	0.4	0.8		

Dominant critical soil details:
Name: Hoopeston
Symbol: 438A Slope: 1.0
Texture: Sandy Loam

Rotation Settings
Start 2011 Years 7
Contouring: ☒ None ☐ On contour ☐ Strip crop
Filter Area: ☒ None ☐ Designed, field edge ☐ Designed, in field

Summary 2011 to 2017
Avg soil loss 0.2 t/ac/yr
Field "T" 3 t/ac/yr
Avg P Index 1 SCI 0.7
P2O5 K2O
Removal 405 1K lb/ac
Balance -224 -431 lb/ac
Soil test P is 50 or less so no P2O5 balance target is needed.

Crop Year (Fall to Fall): **2017**

Crop: **Corn silage**

Yield Goal: **20.1-25**

Tillage: **No Till**

Soil Test Date: **2015-11-18**

Lime Rec: **0**

Irrigation / MRTN info: ☐ Irrigated **0.05/High**

Season notes: **(lbs/acre)**

UW Recommendation:

	N	P2O5	K2O
Prior years' extra:	-	0	0
Adjusted UW recommendation:	210	0	240
1st & 2nd year legume credit:	90	-	-
2nd & 3rd year manure credit:	0	-	-
This year's manure:	36	27	99
This year's fertilizer:	46	0	0
Total credits & applications:	172	27	99
Over(+)/Under(-) adj UW rec:	-38	27	-141
Annual Total Pl:	1		
Particulate Pl:	0.1		
Soluble Pl:	0.8		



Nutrient Application Planner

Farm nutrient source availability

Values are for first year available nutrients in lbs/ton or lbs/1000 gallons

1

Source name	Nutrient type	Units	N	N Incorp	N Inject	P2O5	K2O	S	Available annual volume	Planned applications	Remaining volume
Dairy Solid	Dairy, solid	Tons	2	3	3	3	6	0.7	448	728	-280
Liquid	Dairy, liquid	Gallons	4	6	7	3	11	0.6	934,000	1,072,357	-138,357
Total solid:									448	728	-280
Total liquid:									934,000	1,072,357	-138,357

Field: 1 Crop Year: **2017** Crop: **Corn silage** N **-38** P2O5 **27** K2O **-141**

Acres: 14.5 Soil Test P: 43 K: 66 Field Over(+)/Under(-) Application (lbs/acre)

Field Application Restrictions: **N** Winter Slope **SWQMA** Groundwater Conduit Other **Field Restrictions**

Manure / Biosolid Applications **Fall 2016 thru Summer 2017** Fertilizer Applications

☐ ☐ **Grazing Est** ☐ ☐

Source name	Season	Spread method	Rate	Units	Actual
Liquid	Fall	Unincor...	8,966	gals/a...	<input checked="" type="checkbox"/>

Source name	Season	Spread method	Rate	Units	Actual
Urea	Su...	Unincor...	100	lbs/acre	<input type="checkbox"/>

All applications entered for this field and crop year appear to comply with Nutrient Management Standard 590.

Please explain non-compliant applications: **Clear Text**

Apply **Close** **Help**

SnapPlus 16.3 built on 2016-11-01 - Maple Hills Dairy

File

Import/Export

Tools

View

Help

Save snapshot

?

Farm name: farmTables.2017MapleHillsDairy.snapDb

Location: M:\wp\Stufffarm2017nmp

Farm

Soil Tests

SnapMaps

Fields

Nutrients

Cropping

Daily Log

Reports

PDF

Excel

Print

Folder

1 of 1

Page Width

Find | Next

6

7

4

273B2

Alfalfa/Brome

Pasture, variable stocking, managed continuous, grass/legume

3.1-4

45

180

None

41

194

0

0

45

0

0

0

0

0

-45

10.5 planned Other Crops acres

367 total planned acres

Total Manure Volume	Manure App Plan	Remaining Manure
448 tons	728	-280
934000 gals	1,072,357	-138,357

Tillage Abbreviations

Abbreviation	Tillage
None	None
NT	No Till
SCD	Spring Chisel, disked
SFC	Spring Cultivation

Total Planned to be Applied

760 planned lb Ammonium sulfate (AMS)

728 planned ton Dairy Solid

12,110 planned lb Diammonium Phosphate (DAP)

1,072,357 planned gal Liquid

785 planned gal Liquid 10-34-0

32,260 planned lb Potassium Chloride

27,888 planned lb Urea

Nutrient Management Plan

NM1 Narrative and Crops

NM2 Compliance Check

NM3 Field Data and 590 Assessme

NM4 Manure Tracking

NM5 Spreading and NM Sorted By

NM6 Winter Spreading Plan

CAFO

Farm Management

Soil Loss

Water Quality

Data Dump

ST. CROIX COUNTY

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Nutrient Management Plan Checklist

Submitted annually to SCC – CDD by a qualified Nutrient Management Planner certifying that the submitted plan complies with Wisconsin's NRCS 590 nutrient management standard.

ATCP 50.04 (3) A landowner shall have and follow a nutrient Management plan when applying nutrients to any field.



Nutrient Management Plan Checklist

Sec. 92.05(3)(k), Wis. Stats.
ATCP 50.04(3) Wis. Admin. Code

Use this form to check nutrient management (NM) plans for compliance with the WINRCS 590 Standard (Sept. 2005).

County name: _____ Date Plan Submitted: _____ Growing season year NM plan is written for _____
Township (T., N., S.) – (R., E., W.) Initial Plan or Updated Plan (circle one) (from harvest to harvest)

Name of qualified nutrient management planner		Planner's business name, address, phone:
Circle the planner's qualification: 1. NAICC-CPCC 2. ASA-CCA 3. ASA-Professional Agronomist 4. SSSA-Soil Scientist 5. DATCP approved training course 6. Other credentials approved by DATCP	Cropland Acres (owned & rented)	Name of farm operator receiving nutrient management plan:
	Rented farm(s) (landowner name(s) and acreage:	
Circle relevant program requirement or regulation the plan was developed for: Ordinance, USDA, DATCP, DNR, NR 243 – NOD or WPDES		

	Yes	No	NA
1. Are the following field features identified on maps or aerial photos in the plan?			
a. Field location, soil survey map unit(s), field boundary, acres and field identification number			
b. Areas prohibited from receiving nutrient applications: Surface water, established concentrated flow channels with perennial cover, permanent non-harvested vegetative buffer, non-farmed wetlands, sinkholes, lands where established vegetation is not removed, nonmetallic mines, and fields eroding at a rate exceeding tolerable soil loss (T)			
c. Areas within 50 feet of a potable drinking water well where mechanically-applied manure is prohibited			
d. Areas prohibited from receiving winter nutrient applications: Slopes > 9% (12% if contour-cropped); Surface Water Quality Management Area (SWQMA) defined as land within 1,000 ft of lakes and ponds or within 300 ft of perennial streams draining to these waters, unless manure is deposited through winter plowing/pasturing of plant residue and not exceeding the N and P requirements of this standard; Additional areas identified within a conservation plan as contributing runoff to surface or groundwater			
e. Areas where winter applications are restricted unless effectively incorporated within 72 hours: Land contributing runoff within 200 feet upslope of direct conduits to groundwater such as a well, sinkhole, fractured bedrock at the surface, tile inlets, or nonmetallic mine			
f. Sites vulnerable to N leaching: Areas within 1,000 feet of a municipal well, and soils listed in Appendix 1 of the Conservation Planning Technical Note WI-1			
2. Are erosion controls implemented so the crop rotation will not exceed T on fields that receive nutrients according to the conservation plan or WI P Index model?			
3. Were soil samples collected and analyzed within the last 4 years according to UW Publication A2100 recommendations?			
4. Using the field's predominant soil series and realistic yield goals, are planned nutrient application rates, timing, and methods of all forms of N, P, and K listed in the plan and consistent with UW Publication A 2809, Soil Test Recommendations for Field, Vegetable and Fruit Crops, and the 590 standard?			
5. Do manure production and collection estimates correspond to the acreage needed in the plan? Are manure application rates realistic for the calibrated equipment used?			
6. Is a single phosphorus (P) assessment of either the P Index or soil test P management strategy uniformly applied to all fields within a tract?			
7. Are areas of concentrated flow, resulting in reoccurring gullies, planned to be protected with perennial vegetative cover?			
8. Will nutrient applications on non-frozen soil within the SWQMA comply with the following?			
a. Unincorporated liquid manure on unsaturated soils will be applied according to Table 1 of the 590 standard to minimize runoff			
b. One or more of the following practices will be used: 1) Install/maintain permanent vegetative buffers, or 2) Maintain greater than 30% crop residue or vegetative coverage on the surface after nutrient application, or 3) Incorporate nutrients leaving adequate residue to meet tolerable soil loss, or 4) Establish fall cover crops promptly following application			

I certify that the nutrient management plan represented by this checklist complies with Wisconsin's NRCS 590 nutrient management standard.
Signature of qualified nutrient management planner _____

ATCP 50 Proposed Rule Revisions

NRCS 590 –What Changed

- Winter manure spreading requirements
- Increased groundwater protections
- Increased surface water protections



590 Changes –

Winter Spreading Restrictions

Current:

- 7,000 gal/ac limit
- No manure spreading
 - Within Soil Water Quality Management Areas (SWQMAs)
 - On locally identified areas (sinkholes, well, fractured bedrock at surface, tile inlet, nonmetallic mines)
 - Within 200 ft upslope of direct conduits to groundwater
 - On slopes greater than 12%

New:

- 7,000 gal/ac limit or 60 lbs Phosphorous (P2O5), whichever is less
- No manure spreading
 - Within SWQMAs
 - On locally identified areas
 - Within 300 ft of direct conduits to groundwater, not just upslope
 - On slopes greater than 6% or to fields with concentrated flow channels
 - No liquid manure application in February and March on:
 - DNR Well Compensation Areas for manure contamination
 - Soils with 5 ft or less to Silurian dolomite

590 Revisions – Groundwater

Current:

- No manure within 50' of drinking well, unless grazing
- Incorporate manure within 200' upslope of direct conduits to groundwater



New:

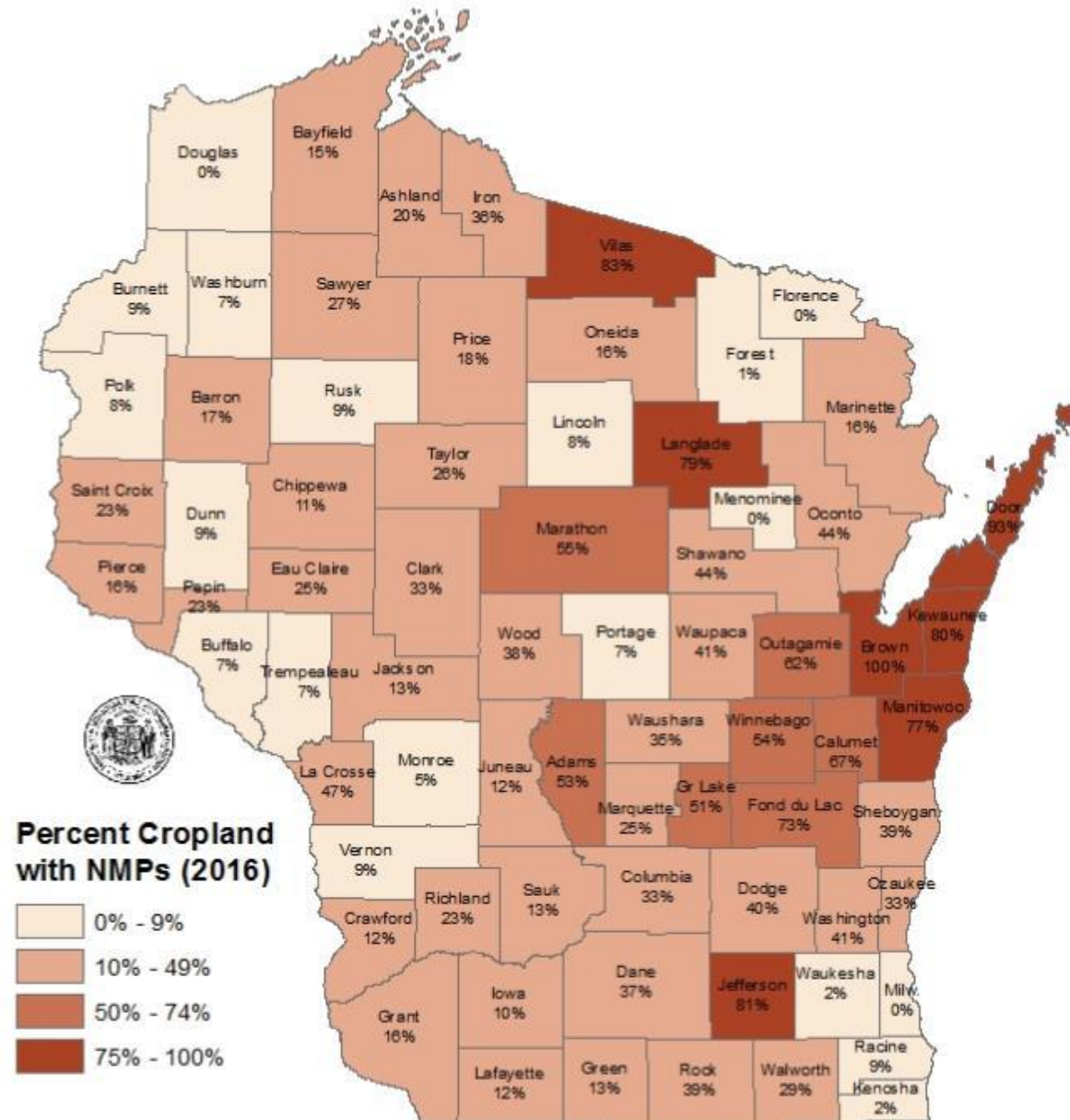
- No nutrients within:
 - 50' of direct conduits to groundwater\ (within 300" in winter), unless grazing
 - 8' of irrigation wells
- Only manure that is treated to substantially eliminate pathogens can be applied within:
 - 1,000' of a Community potable water well
 - 100' of a Non-Community potable water well (church, school, and restaurant)

https://datcp.wi.gov/Pages/Programs_Services/ATCP50RuleRevision.aspx

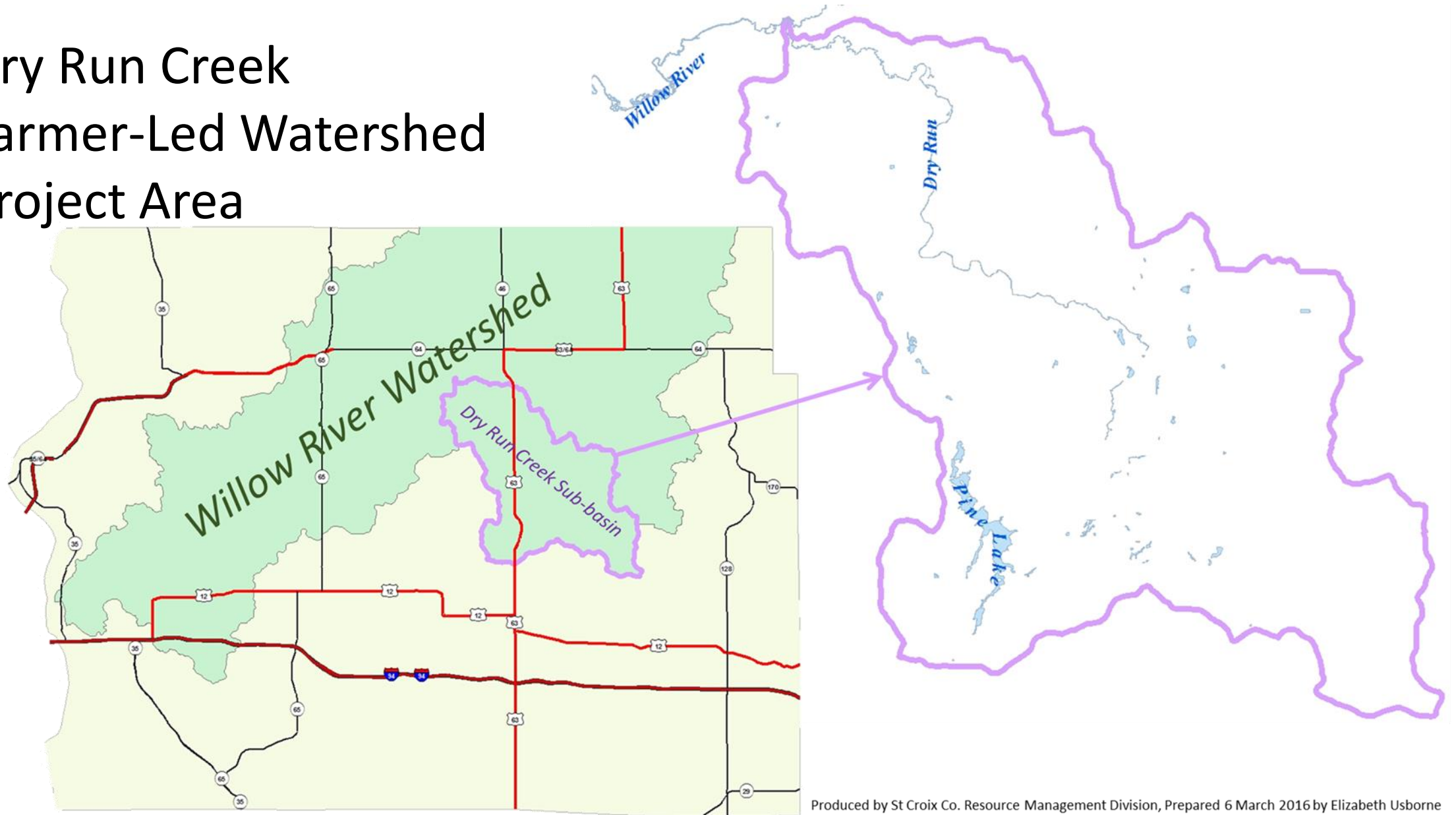
Percent of County Cropland covered by a 590 NMP

Based on NM checklists
submitted to DATCP by
county LCDs, NRCS, DNR
and NM planners

St. Croix County had
40,610 acres (23%) of
NMP submitted in 2016



Dry Run Creek Farmer-Led Watershed Project Area



Produced by St Croix Co. Resource Management Division, Prepared 6 March 2016 by Elizabeth Usborne

Dry Run Farmer-Led Watershed

Projects funded



Cover Crops



Grassed Waterways

Reductions Gained Through Practices Implemented in 2015-2016

Nitrogen
7,792 lbs./year

Phosphorus
2,764 lbs./year

Sediment
568 tons/year



Soil Samples



Questions?

Wisconsin Pollutant Discharge Elimination System (WPDES) permit

A Wisconsin animal feeding operation with 1,000 animal units or more is a large Concentrated Animal Feeding Operation (CAFO). The DNR may designate a smaller-scale animal feeding operation (fewer than 1,000 animal units) as a CAFO if it has pollutant discharges to navigable waters or contaminates a well.

The U.S. EPA delegates implementation of the Clean Water Act water pollutant permit and CAFO regulations to the Department of Natural Resources (DNR). The water quality protection permits ensure farms use proper planning, nutrient management, and structures and systems construction to protect Wisconsin waters.

WPDES permits apply only to water protection. They do not give the DNR authority to address air, odor, traffic, lighting, land use nor any of the social concerns people may have about large farms.

NRCS Conservation Practice Code 590 Nutrient Management

What's in a Nutrient Management Plan?



Nutrient Management is where Food, Land, and Water Meet to reduce runoff risks and to maximize profitability

Follows USDA NRCS WI 590 Nutrient Management Standard and UWEX Pub. A2809 *Nutrient application guidelines for field, vegetable, and fruit crops in Wisconsin* to protect water and soil with nutrient application requirements

Accounts for **ALL** Nitrogen-Phosphorus-Potassium nutrient applications for the crop rotation showing adequate acreage for manure application

- Nutrients shall not run off the field during or immediately after application
- Annually update Nutrient Management plan when things change with all crops, nutrients, and tillage used

Soil test sample every 5 acres every 4 years using a DATCP certified lab